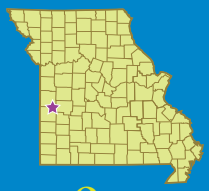
Marmaton/ Wah'kon-Tah

Conservation Opportunity Area



Missouri Department of Conservation

From above, a marsh at Four Rivers Conservation Area appears like a maze of blue and green.

The Marmaton/Wah'Kon-Tah Conservation Opportunity Area (COA) includes the last unplowed wet prairie expanse in Missouri, extensive wetlands and some of the best remaining bottomland woodlands in the region. A 15-mile stretch of wet prairies, bottomland woodlands and marshes occur where four rivers converge to form the Osage River. Tallgrass prairies and prairie headwater streams can be found in the uplands, some of the best remaining examples of tallgrass prairie landscapes.

The Marmaton/Wah'Kon-Tah landscape is home to animals that thrive in bottomland habitats: western painted turtles, Texas brown snakes, pied-billed grebes, least bitterns, American bitterns, black-crowned night-herons, mallards, red-winged blackbirds, beavers and muskrats. Others animals prefer the upland prairies and savannas, including prairie mole crickets, western chorus frogs, northern crawfish frogs, prairie kingsnakes, greater prairie-chickens, upland sandpipers, dickcissels and scissor-tailed flycatchers.

Because of shallow, acidic soils, much of the Marmaton/Wah'Kon-Tah uplands were unsuitable for row crop agriculture. Several large areas have remained in high quality tallgrass prairie. Extensive areas along the Marmaton River were too wet to intensively develop, and although the river's hydrology is greatly altered, many significant wetlands remain. The Marmaton River bottomlands offer one of the best opportunities to restore and manage bottomland woodlands.

Marmaton/Wah'Kon-Tah Conservation Strategies:

- Conserve and restore native grassland habitats, including prairies, savannas and glades, for declining grassland plants and animals.
- Conserve and restore bottomland natural communities, restoring hydrology where appropriate.
- Promote public awareness of best management practices; increase participation in natural community restoration, increase landowner knowledge and contribute to diversifying the regional economy.
- Maintain or reduce the amount of land affected by invasive plants.

Missouri Department of Conservation

The Marmaton River, Muddy Creek, Maraias des Cygnes River and Little Osage River come together to form the Osage River.

Priority Research and Inventory Needs

- Determine Ecological Landtype phases.
- Compile bird counts and breeding bird surveys into a central database.
- Assemble all relevant geospatial datasets.
- Construct a database of all vegetation monitoring.
- Identify the number of acres of suitable nest and brood rearing cover for declining bird species to establish conservation restoration goals.

Conservation Partners

Existing: The Nature Conservancy – Missouri Chapter (TNC); Missouri Prairie Foundation (MPF); Audubon Missouri; Ducks Unlimited (DU); Missouri Conservation Heritage Foundation (MCHF); Missouri Department of Conservation (MDC)

Potential: National Wild Turkey Federation (NWTF); Quail Unlimited; Grasslands Coalition; Natural Resources Conservation Service; U.S. Fish and Wildlife Service (USFWS)

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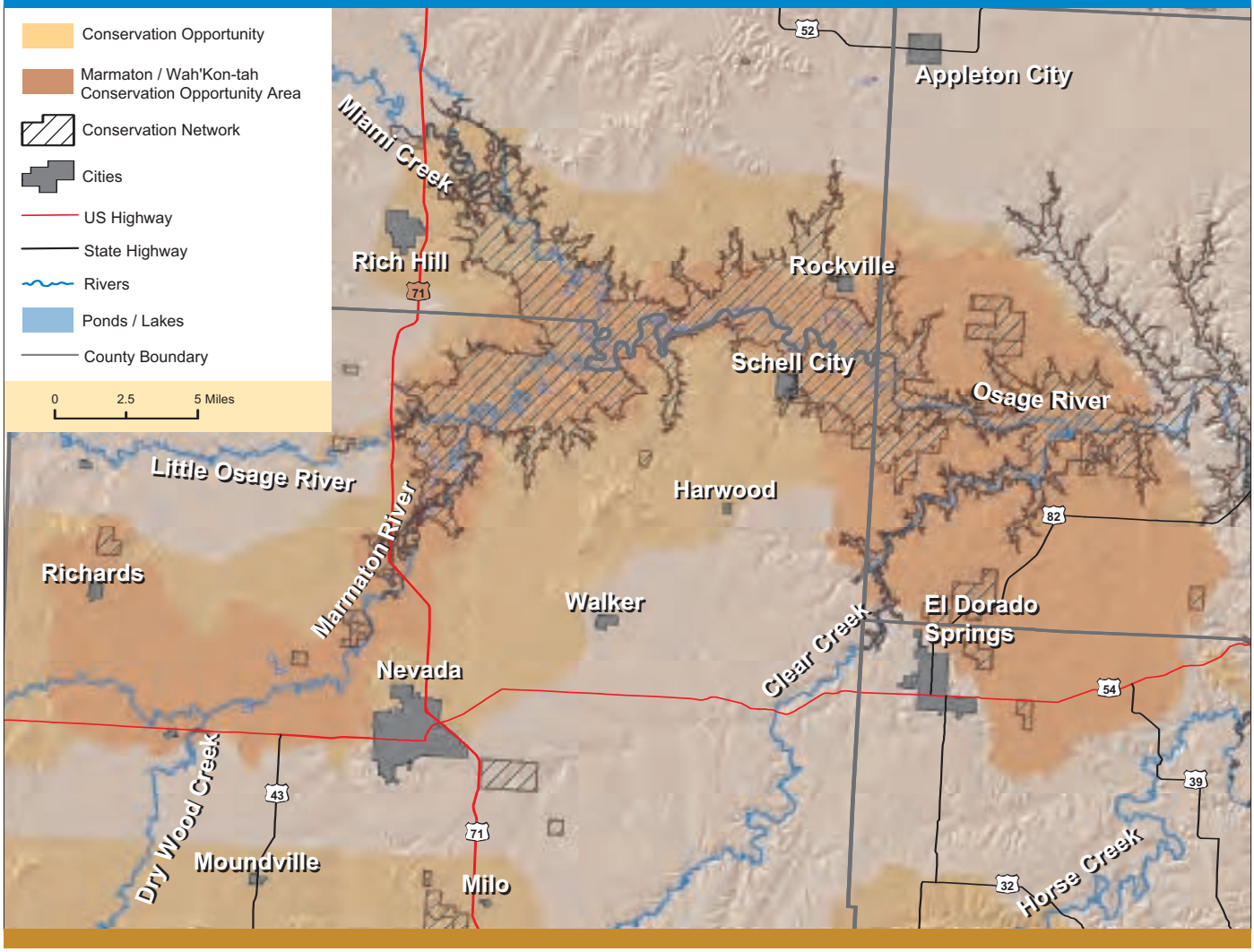


Funding Sources

Existing: TNC annual budget; MPF annual budget; MDC annual budget; MDC Private Lands Cost Share Program; Farm Service Agency Conservation Reserve Program; DU Conservation Projects Program; MCHF Stream Stewardship Trust Fund

Jim Rathert, Missouri Department of Conservation

***Sedge wrens** live in marshes, wet meadows and grasslands. They eat insects and spiders.*

Promising Future Sources: MDC State Wildlife Grants; MDC Wildlife Diversity Funds; MDC Landowner Incentive Program; Missouri Bird Conservation Initiative Grants; NWTF Wild Turkey Super Fund; Soil and Water Conservation Districts State Cost Share Funds; Missouri Conservation Heritage Foundation Grants; USFWS Partners for Fish and Wildlife Program

Existing Conservation Network

Four Rivers Conservation Area (Horton Bottoms Natural Area); Schell-Osage Conservation Area (Schell-Osage Prairie Relicts Natural Area); Linscomb Wildlife Area; Taberville Prairie Conservation Area (Taberville Prairie Natural Area); Douglas Branch Conservation Area; Flight Lake Conservation Area; Monegaw Prairie Conservation Area; Big Drywood Creek Conservation Area; Wah'Kon-Tah Prairie; Marmaton River Bottoms Wet Prairie Preserve (Marmaton River Bottoms Natural Area); MO-KO Prairie; Stilwell Prairie; Schwartz Prairie; Harry S. Truman Lake; Cephas Ford Access; Taberville Access

Wah'Kon-Tah Prairie

Wah-Kon-Tah Prairie captures a fragment of the "sea of grass" that pioneers must have experienced when they first encountered the Great Plains. Named to honor the Osage tribe, Wah'Kon-Tah means "Great Spirit" or "Great Mystery." The prairie is jointly owned by The Nature Conservancy and the Missouri Department of Conservation.

Jim Rathert, Missouri Department of Conservation

Conservation Challenges

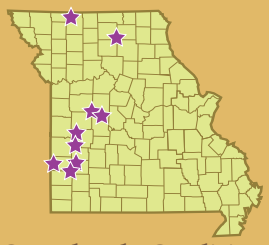
The Marmaton/Wah'Kon-Tah Conservation Opportunity Area reflects the impacts of row crop agriculture, conversion to cool season pasture, clearing of timbered lands and invasion of prairies by woody plants due to fire suppression. The formerly clear, permanent, slow flowing streams and creeks have become sediment-laden and often seasonal as a result of changes to their upland watersheds. Primary threats to native plants and animals include habitat destruction, habitat fragmentation, altered water flow and fire regimes and invasive exotic species. Other potential challenges to conservation success include encouraging landowner participation, economics, altered hydrology and natural processes and limited staff time.

To learn more about the Marmaton/Wah'Kon-Tah Conservation Opportunity Area, please contact:

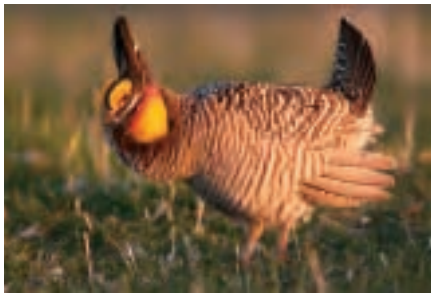
Missouri Department of Conservation
Wildlife Division
P.O. Box 180
Jefferson City, MO 65102-0180

Greater Prairie-Chicken

Recovery Initiative



Grasslands Coalition Focus Areas



Greater Prairie-chicken

Prairie-chicken Lek

Native Prairie

As a result of continuing population declines throughout the state, the Missouri Department of Conservation (MDC) added the greater prairie-chicken to Missouri's endangered species list in 1999.

Greater prairie-chickens once thrived on the vast tracts of open grassland that blanketed a third of the state. Now just a fraction of a percent of native prairie remains. The greater prairie-chicken is just one of many prairie species imperiled by the loss of tallgrass prairie habitats.

The key to conserving prairie-chickens and other tallgrass prairie species is cooperative land management across prairie landscapes. Conservation at the scale needed will necessarily involve many partners, including the residents of Missouri communities that share a common geography with remnant tallgrass prairie habitats and the remaining prairie-chicken populations.

The Grasslands Coalition, a public/private partnership committed to the conservation of Missouri's native grasslands, is refocusing conservation attention on recovering this symbol of healthy tallgrass prairie ecosystems.

Working together, we can recover the prairie-chicken in Missouri. The Grasslands Coalition invites your input and participation in this conservation project.

Recovery Goal: Remove greater prairie-chickens from the state's endangered species list.

- Recovery will be considered accomplished when Missouri has a statewide population of at least 3,000 birds throughout the Grasslands Coalition Focus Areas for 10 years.

Grassland Habitat Goal: Each prairie-chicken population will require a minimum of 4,000 acres of grassland habitat within a 10,000 acre landscape.

- The 4,000 acres of managed grassland bird habitat should include a protected 2,000 acre core centered on prairie chicken leks and scattered tracts making up the remaining 2,000 acres. At least half of these scattered tracts should be greater than 100 acres.

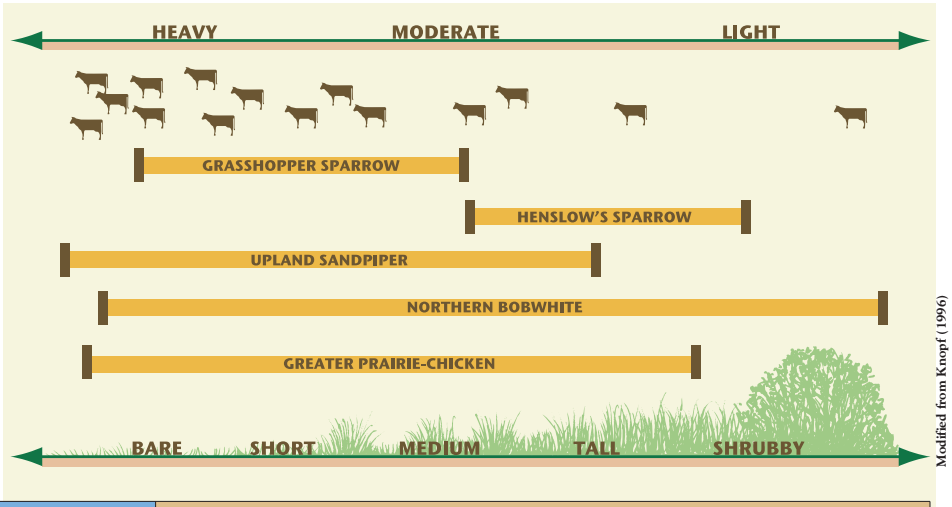
Targeted Landscape	Targeted Species
Native prairie/wildlife friendly grassland complexes	Greater Prairie-chicken, Grasshopper Sparrow, Henslow's Sparrow, Upland Sandpiper

Other Species that will Benefit

Eastern Prairie Fringed Orchid, Western Prairie Fringed Orchid, Oklahoma Sedge, *Carex bicknellii, Carex missouriensis, Carex opaca*, Wolf's Spike Rush, Mead's Milkweed, American Burying Beetle, Prairie Mole Cricket, Regal Fritillary, Grassland Crayfish, Northern Crawfish Frog, Slender Glass Lizard, Bullsnake, Ornate Box Turtle, Topeka Shiner, Bobolink, Bell's Vireo, Scissor-tailed Flycatcher, Dickcissel, Eastern Meadowlark, Northern Harrier, Sedge Wren, Loggerhead Shrike, Swainson's Hawk, Hispid Cotton Rat, Prairie Vole, Black-tailed Jack Rabbit

Photos: Jim Rathert, Missouri Department of Conservation

Grassland birds require a wide variety of plant heights and densities ranging from bare ground to tall grasses. One method used to produce this structural diversity in grasslands is called patch burn grazing. Patch burn grazing mimics the historical interaction of two ecological processes that shaped native prairies–fire and grazing. Each year a third of the pasture is burned. The lush regrowth focuses grazing within the burned area. The burned unit shifts from year to year, providing varied structure throughout the managed area.



Modified from Knopf (1996)

Desired Change	Proposed Monitoring
↑ Increasing numbers of prairie-chickens	Population survey of prairie-chickens annually
↓ Decreased fragmentation in prairie landscapes	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of prescribed fire management, rest-rotation and patch-burn grazing	Acres benefited as reported by MDC Private Lands program monitoring
↓ Decreased acres of grassland dominated by fescue	Periodic assessment of land cover using satellite imagery or aerial photography/ground truthing
↑ Increased acres of cropland restored to native grasses and prairie forbs or wildlife friendly grasses	Periodic assessment of land cover using satellite imagery or aerial photography
↓ Declining amount of sericea lespedeza due to active control methods	Field visits and regular site evaluations
↑ Improved native plant community composition on remnant prairies	Vegetation sampling to detect changes in conservative prairie plants at 3-year intervals
↑ Increased community awareness and involvement in prairie conservation	Human dimensions survey and workshops

This initiative represents just one aspect of tallgrass prairie conservation. The Grasslands Coalition seeks long-term protection of prairie landscapes including the full array of native natural communities and species.

To learn more, please contact:

Missouri Department of Conservation
Wildlife Division
P.O. Box 180
Jefferson City, MO 65102-0180